



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Sergei Kryukov, et al.      Examiner: Unknown  
Serial No. 09/897,765      Group Art Unit: 2624  
Filed: July 2, 2001      Docket No. 1202.021US1  
Title: REMOVAL OF BLOCK ENCODING ARTIFACTS

COMMUNICATION RE: INCORRECT FILING RECEIPT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Applicants hereby request correction of the Filing Receipt with respect to the above-identified patent application. In the Filing Receipt received November 8, 2001, (copy enclosed), the number of independent claims is incorrect. The Filing Receipt reads, "6", it should read "4". This is evidenced by the claims, upon the original copy of the patent application (enclosed).

Applicants would appreciate the above-identified printing error be corrected and that a new "corrected" filing receipt be sent to Applicants' representatives at the address given below.

Respectfully submitted,

SERGEI KRYUKOV, et al.

By Their Representatives,

Mark A. Litman & Associates, P.A.  
York Business Center, Suite 205  
3209 West 76<sup>th</sup> Street  
Edina, Minnesota 55435  
(952) 832-9090

Date: 19 November 2001

By: Mark A. Litman  
Mark A. Litman  
Reg. No. 26,390

CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described herein, are being deposited in the United States Postal Service, as first class mail, with sufficient postage, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on 19 November 2001.

Mark A. Litman  
Name

Mark A. Litman  
Signature



## UNITED STATES PATENT AND TRADEMARK OFFICE

JAN 07 2002

C 84  
P 14

Page 1 of 2

COPY

COMMISSIONER FOR PATENTS

UNITED STATES PATENT AND TRADEMARK OFFICE

WASHINGTON, D.C. 20231

www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/897,765	11/08/2001	2624	✓	1008	1202.021US1	2✓	23✓

## CONFIRMATION NO. 8208

## UPDATED FILING RECEIPT



\*OC000000007019535\*

MARK A. LITMAN & ASSOCIATES, P.A.  
York Business Center, Suite 205  
3209 W. 76th St.  
Edina, MN 55402

Date Mailed: 11/05/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Sergei Nikolaevich Kryukov, Saint Petersburg, RUSSIAN FEDERATION; ✓  
Tatyana Olegovna Semenkova, Saint Petersburg, RUSSIAN FEDERATION; ✓  
Krzysztof Antoni Zaklika, Saint Paul, MN; ✓

## Assignment For Published Patent Application

JASC Software; ✓

## Domestic Priority data as claimed by applicant

## Foreign Applications

If Required, Foreign Filing License Granted 08/21/2001

Projected Publication Date: 01/02/2003

Non-Publication Request: No ✓

Early Publication Request: No ✓

## Title

Removal of block encoding artifacts ✓

received  
11/8/01 AM

COPY

Preliminary Class

382



**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

COPY

**WHAT IS CLAIMED:**

*Independent* 1. A method of reducing artifacts in an image previously processed by block transform encoding comprising the steps of:

- 5        determining block boundaries;
- determining an approximate metric of artifact visibility;
- adaptively filtering luminance;
- adaptively adjusting local saturation variation;
- adaptively simulating high spatial frequency image detail;
- 10      wherein the adaptive steps are executed to a degree or an amount dependent on the metric of artifact severity.

2. The method of claim 1 wherein prior to adaptively filtering luminance, luminance values are interpolated across block boundaries

- 15      3. The method of claim 1 wherein in conjunction with adaptively filtering luminance, chrominance is adaptively filtered.
- 20      4. The method of claim 2 wherein in conjunction with adaptively filtering luminance, chrominance is adaptively filtered.

*Independent* 5. A method of reducing artifacts in an image previously processed by block transform encoding comprising the steps of:

- 25      determining block boundaries;
- determining an approximate metric of artifact visibility;
- adaptively filtering luminance with a filter;
- adaptively increasing local chrominance contrast;
- adaptively simulating high frequency image detail by means of sharpening and addition of noise;
- 30      wherein the adaptive steps are executed to degree that depends on the metric of artifact visibility.

COPY

independent 15. A method of reducing artifacts in an image previously processed by block transform encoding comprising the step of selecting a median filter window based on an assessment of a pixel value according to a variance of a binary mask.

5 16. The method of claim 1 wherein the pixel value comprises luminance texture.

independent 17. A method of reducing artifacts in an image comprising the step of selecting a median filter window based on an assessment of a pixel value according to a variance of a binary mask.

10

18. A computer having software and hardware therein that is capable of executing and performing the method of claim 1.

15 19. A computer having software and hardware therein that is capable of executing and performing the method of claim 2.

20 20. A computer having software and hardware therein that is capable of executing and performing the method of claim 5.

20 21. A computer having software and hardware therein that is capable of executing and performing the method of claim 8.

22. A computer having software and hardware therein that is capable of executing and performing the method of claim 10.

25

23. A computer having software and hardware therein that is capable of executing and performing the method of claim 15.

Total Independent Claims = (4)

30